



NEW "SUNSET LIMITEDS" ON SOUTHERN PACIFIC

Old New Orleans and the Texas Plains reflected in lounges of five Budd-built 15-car trains—Dormitory accommodates crew of 27—Car structures of girder type

Five passenger trains of 15 cars each constitute the new "Sunset Limiteds" which the Southern Pacific inaugurated on Sunday, August 20, between Los Angeles, Cal., and New Orleans, La. All of the cars are of all-stainless-steel construction, built by the Budd Company, Philadelphia, Pa., styled by John Harbeson and designed by the builder's engineers.

Each train, from front to rear, consists of one baggage-postal car; one baggage-dormitory car; one 48-passenger divided chair car with conductor's space and a newsstand; three 44-passenger chair cars; one "Pride of Texas" coffee-shop-lounge car with seats for 46; one "Audubon" diner with tables for 48; one "French Quarter" lounge car which seats 39, and six sleepers, each with 10 roomettes and six double bedrooms. There are 312 revenue seats and 133 seats in the lounges, diner and coffee shop, combined for a total of 445.

These trains operate daily in each direction between Los Angeles and New Orleans on a 42-hour schedule for the 2,070-mile run. This is five hours less than the previous eastbound time and three and one-half hours less than the previous westbound schedule. Departure time from Los Angeles has been changed from 3 p.m. to 8 p.m. Pacific Time, with the same afternoon arrival at New Orleans as the former schedule. Westbound, the train departs from New Orleans at 12:30 a.m. Central Time, instead of 11 a.m., and arrives at Los Angeles the next day at 4:30 p.m. instead of the second day at 6:30 a.m.

The exterior of each train is of unpainted stainless steel, with a letter-board band of Daylight red running the entire length of the train. Centered beneath the windows of every car is a colorful name plate bearing the name

of the train in orange and the number of the car in Daylight red.

The "French Quarter" lounge reflects the gaiety of old New Orleans. Pier panels and ceiling are painted watermelon red and small white stars of varying sizes have been superimposed against the side panels of the ceiling. Cast-iron treillages, made from the same molds used in the casting of some of the originals in New Orleans and painted bone white, are placed at either end of the car and applied to all pier panels. The dado is painted cypress gray and the fern-feather-carpet pattern is in gray and rose. Ceiling lighting fixtures are painted watermelon red, while cove lights are satin-finish aluminum. Venetian blinds are cypress gray.

The car is furnished with chairs and sofas on metal frames with foam-rubber covered with watermelon red pebble-tweed upholstery. Four banquette tables are covered in Formica of gray linen design inlaid with a black and red playing-card motif. Magazine tables of silver-gray maple are also covered with gray linen Formica.

The curved bar is set off from the main lounge section by partitions of cast-iron treillages. Here the walls are cypress gray from the rubber-tile floor to the ceiling where the watermelon red is carried in from the main lounge. The bar, itself, is covered with black Formica. The front of the bar is padded with a moss gray leather, trimmed with metal bands. The mirrors and glass door of the back bar cabinet are etched with birds and foliage.

A lounge-car attendant will be available to provide valet service. There is also a shower for the use of sleeping-car passengers.

The dining room of the dining car is decorated in soft



Left—Looking into the transverse bedroom from the adjoining longitudinal room. Right—The longitudinal bedroom

tones of Bayou green, turquoise and Gulf blue, with hand-painted reproductions of bird illustrations by the famous artist and naturalist, John James Audubon, executed by the decorator, Gustav Ketterer, of Philadelphia. A bird illustration is painted over each table on a bone-white frieze running the length of the car and on the bone white panels of the partitions between the dining section and the buffet and at the other end of the dining room.

The dado is soft green. The background of the ceiling is turquoise with a diagonal lattice of the green superimposed to form an arborescent effect.

Each window in the dining section has venetian blinds and drapes. The blinds have turquoise slats and guides and green tapes. The drapes have a bird-of-paradise motif done in turquoise, green, bronze and rust on a background of eggshell color. Chairs are upholstered in turquoise pebble-tweed material. The carpet is the fern-feather pattern in rose, gray and turquoise.

The kitchen is completely equipped with stoves, refrigerators, sinks and cabinets of stainless steel. Refrigerators are cooled with the Carbofrezer dry-ice system, developed by Southern Pacific engineers in conjunction with the Carbofrezer Company.

The "Pride of Texas" Coffee-Shop-Lounge

The Texas range is suggested by the decorations of the "Pride of Texas" coffee-shop lounge. Colors are combinations of adobe and tobacco brown and cottonwood yellow, to which character is given by the use of genuine leather authentically branded with famous pioneer Texas

cattle brands, and by large longhorn steer heads, and Mexican spurs done in silver repoussé.

The dining-tavern section has a jaspe rubber-tile floor of yellow. The dado is a flat adobe brown and the pier panels from the window sill line to the cove lights are covered in a palomino tan leather decorated with the brand marks, actually applied with hot irons. Venetian blinds are painted bone white with adobe brown tapes.

The frieze is bone white with decorative repoussés fashioned with an antique silver finish above each window.

In the coffee-shop section the motif is authentic Mexican spurs; in the tavern section, longhorn steer heads. The ceiling is painted yellow.

Chairs in the coffee shop are upholstered in foam rubber and covered with tobacco brown leather with palomino tan leather piping.

At one end is a quarter bar covered in front with alternate bands of tobacco brown and palomino tan saddle leather decorated with brand marks. In the area around the bar the dado is painted adobe brown; the pier panels and venetian blinds are bone white.

The mirrors behind the bar are etched with cactus designs and are trimmed in satin-finish metal. The border of the top of the corner cabinet behind the bar has clear plastic stars, through which light filters from the interior of the cabinet.

The kitchen and pantry equipment is stainless-steel like that in the main diner. The refrigerators have the same dry-ice system as the dining car.

Each of the six sleepers of the "Sunset Limited" has



Left—Three colors add variety to the appearance of the coaches. Right—The "Pride of Texas" coffee-shop-lounge features yellow and tan with details characteristic of the cattle ranges

six double bedrooms and ten roomettes. The double bedrooms are in two different plans. One has a two-place sofa with individual arm rests, and the other a one-place sofa seat and a folding arm chair which folds beneath the lower bed at night. Both have their own full-length wardrobe locker, an enclosed toilet and lavatory facilities.

Both the roomettes and double bedrooms have instant-start fluorescent overhead lights, reading lamps, a blue night light and large mirrors. These bedrooms can be combined en suite by folding back a partition, and can then accommodate four persons with room for bridge or a play space for children.

Mr. Harbeson and the Southern Pacific collaborated in the selection of the three color combinations with which these sleepers are decorated. They are tan and light taupe beige; parchment and bright navy; sand white and delicate green. The two colors are reversed in alternate roomettes. In the first two schemes upholstery alternates between wood tone and ashes of roses; in the third, between wood tone and cedar.

Each sleeper contains a porter's roomette which follows one of the two color schemes in that car. Card tables and chairs with stainless-steel frames are available in every car.

The rear end of the rear sleeping car — the last car in the train — is built with rounded corners and no diaphragm connection. The side sheathing is continued around the corner of the end to give a finished appearance. A Mars back-up and emergency light and fixed supplementary marker lights adjacent are built in the rear end of the roof. Rear-end fixed marker lights are also built into the letterboard area.

The Chair Cars

Seats in the chair cars are spaced 52 in., apart which allows ample leg room for the tallest traveller. Seats are the Sleepy Hollow type with adjustable reclining backs and a full-length leg rest that can be placed out of sight

beneath the seat. In addition, there is a foot rest for each seat. Each chair has an individual ash tray and each pair of seats has a light in the luggage rack.

Each car has full-color photographic murals at the ends. These are of scenic and famous places in the territory and cities through which the trains pass.

There are three different color schemes for the chair cars. One is brown and tan, with turquoise upholstery; the second is rose and light pink, with upholstery in two tones of blue; and the third, two tones of rose, with two tones of beige upholstery. All ceilings are orchid.

On each of the "Sunset Limiteds" there is a chair car divided into three sections. One section seats 32 passengers, the other 16, and the third contains a newsstand and office for the conductor. These are decorated in the brown and tan color scheme.

Floor-to-ceiling partitions separate the two chair sections and a brown door with a decorative grill provides entry between the sections.

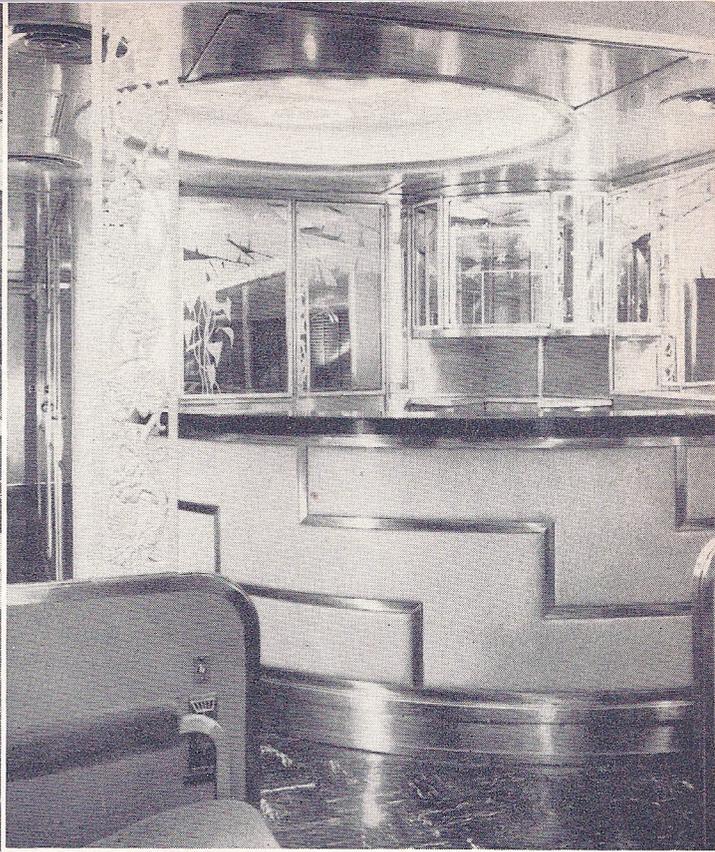
The newsstand space has a stainless-steel counter and lockers. The news agent will have daily papers and magazines, as well as soft drinks, candy and tobacco for sale. Dry-ice refrigeration is provided for storage of soft drinks. When the news agent closes his shop for the night, a stainless-steel gate is placed before the open space.

The Baggage-Dormitory and -Postal Cars

The baggage-dormitory car can accommodate 27 members of the train's crew in five rooms that have bunks similar to those found on navy ships. There is an individual room for the steward.

Each of the crew's rooms has an individual wash basin. Elsewhere in this section of the car are wardrobes in which crewmen can hang uniforms and personal clothing. There is a shower.

The steward's room has upper and lower berth and is painted in tan, with woodtone upholstery. Each of the crew's rooms is painted tan. Flooring throughout is red



Left—The lounge end of the "Pride of Texas" car. Right—The "French Quarter" lounge bar

marbleized rubber tile. All doors are gunmetal in color. The baggage section of the baggage-dormitory car is 30 ft. long. It is provided with toilet and water cooler.

The baggage-postal car has a 30-ft. railway post office and a 52-ft. baggage room. Along the sides of the baggage room at one end are eight shelves 30 in. wide by 8 ft. long, arranged two deep. These are hinged to the wall and suspended by chains at the ends so that they may be turned up against the side of the car.

The Car Structures

The cars are built of stainless-steel structural members and sheathing, with the exception of the end underframe structures which are of low-alloy high-tensile steel. The stainless steel is assembled by the Budd Shotweld process of controlled-energy welding; the end underframe structures, by arc welding. Unlike most of the cars built previously by Budd, the bodies of which were of truss construction, these cars are of modified girder construction.

The center sill comprises two special side channels and a bottom closing member and has a section area of 12.2 sq. in. Transverse floor members of Z-section, extending from side sill to side sill, are closely spaced between the bolsters. The bottom flanges are extended so that each overlaps the adjacent section to which it is welded to form a closed subfloor. This subfloor is welded to the top of the center sill. Located at the ends of the middle third of the car are two single-web crossbearers which tie the side sills and the center sill together and, with heavier section floor pans adjoining them, serve as floor stiffeners.

The end underframe unit includes the draft sills, bolster and the steel casting which combines the end sill and the coupler carrier support. Extensions of the unit inboard of the bolsters are plug-welded and riveted to the main center sill.

The subfloor, which is of heavier gage material between the bolsters and the ends of the car, is welded to

the draft sills and forms a transverse girder which, together with the bolster, distributes some part of collision loads to the side members.

The load-carrying side sheets below the windows are stainless steel, formed with wide spaced longitudinal corrugations which support light-gage narrow fluted panels inserted in the spaces between the nodes of the corrugations so that no change has been made in the finished appearance of the car. The pier panels are sheathed with flat sheets of stainless steel of relatively heavy gage.

The ends of the cars are stainless-steel sheets in sections, each with a vertical flange at one edge which serves as a stiffener. These sections are welded together. The collision posts are built-up sections of heavy-gage stainless steel.

The roof is built up of Z-section carlines and longitudinally corrugated roof sheets, with two exterior purlines of flanged channel section extending the length of the car.

The connection between the roof and side of the car is made by two flat plates of stainless steel which reach from end to end of the car. That on the outside is the letterboard which extends well up under the lower section of corrugated roof sheet and down the side posts

Principal Dimensions and Weights of the "Sunset Limited" Cars

Dimensions, ft.-in.:	
Length coupled	85-0
Length, center to center of bolsters	59-6
Width (over side sills, including molding)	10-7/16
Height, top of rail over roof	13-6 1/4
Height, top of rail to top of plywood floor	4-4 3/8
Weights, ready to run, lb.:	
Baggage-postal	137,600
Baggage-dormitory	126,200
Divided chair car	128,480
44-passenger chair car	124,580
"Pride of Texas" coffee-shop-lounge	143,400
Dining car	143,280
"French Quarter" lounge car	129,780
Sleeping cars	137,600



Bird groups in the Audubon manner feature the dining room

to the top rail just over the windows. The inside sheet is welded to the roof side plate and carlines and to the inside of the side posts.

The sides of the cars are finished with shallow vertical skirts below the side sills. At the ends the skirts are downward to join the deeper inward-curving skirt under the step well of the vestibule. Hinged openings are pro-

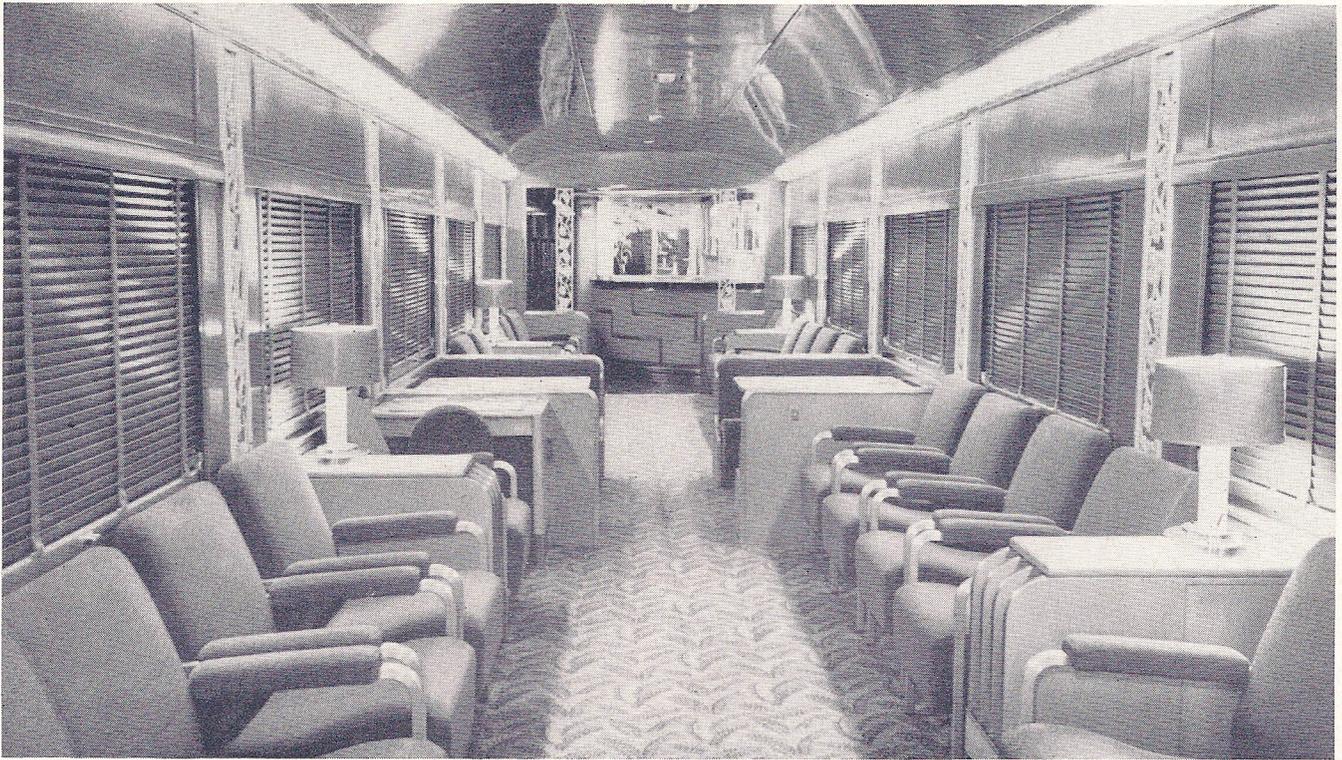
vided wherever needed for access to under-body equipment.

The interior finish of the car walls and ceiling is aluminum sheets. In general, partitions are of plywood, faced on both sides with either aluminum or stainless steel, except on sleepers where bonderized zinc-coated carbon steel is used.

Partial List of Materials and Equipment on the Budd-Built "Sunset Limited"

Blind rivets for attaching side panels Cherry Rivet Co., Los Angeles, Cal.
 Truck frames and bolsters ... General Steel Castings Co., Granite City, Ill.
 Wheels and axles Standard Steel Works Div. of Baldwin Locomotive Works, Burnham, Pa.
 Journal bearings and boxes . SKF Industries, Philadelphia, Pa.
 Truck springs American Locomotive Co., Railway Steel Spring Div., New York
 Locking truck center pin W. H. Miner, Inc., Chicago
 Shock absorbers Houdaille-Hershey Corp., Houde Engineering Div., Buffalo, N. Y.
 Hot journal alarm system ... Fenwal, Inc., Ashland, Mass.
 Draft gear Waugh Equipment Co., New York
 Draft-gear yoke; coupler; uncoupling mechanism (one side) National Malleable & Steel Castings Co., Cleveland, Ohio
 Sound deadening material .. Fabreka Products Co., Boston, Mass. Thermoid Co., Trenton, N. J.
 Wheel-slide control:
 Four-wheel trucks Budd Co., Philadelphia, Pa.
 Six-wheel trucks Westinghouse Air Brake Co., Wilmerding, Pa.
 Air brakes, hose and couplers, water-raising equipment, water-system filler valves .. Westinghouse Air Brake Co., Wilmerding, Pa.
 Truck brakes:
 Four-wheel trucks Budd Co., Philadelphia, Pa.
 Six-wheel trucks American Steel Foundries, Chicago
 Bushings x-Cello-O Corp., Detroit, Mich.
 Side bearings (six-wheel trucks) American Steel Foundries, Chicago
 Brake shoes (six-wheel trucks) American Brake Shoe Co., New York
 Hand brakes National Brake Co., New York

Generator (baggage-postal) ... Safety Car Heating & Lighting Co., New York
 Generator transformers, amplifier-boosters inverter, wire and cable General Electric Co., Schenectady, N. Y.
 Generator drive Spicer Mfg. Div., Dana Corp., Toledo, Ohio
 Battery-charging, trainline and standby receptacles; trainline jumpers; electric marker light receptacles Pyle-National Co., Chicago
 Battery Edison Storage Battery Div., Thomas A. Edison, Inc., West Orange, N. J.
 Jumpers, plugs and receptacles Mines Equipment Co., St. Louis, Mo.
 Fuse testers Vapor Heating Corp., Chicago
 Lamp regulator Safety Car Heating & Lighting Co., New York
 Annunciators Edwards & Co., Norwalk, Conn.
 Radio and public address .. RCA Victor Div., Trenton, N. J.
 Light fixtures Luminator, Inc., Chicago
 Safety Car Heating & Lighting Co., New York
 Air conditioning Frigidaire Div., General Motors Corp., Dayton, Ohio
 Steam trainline insulation .. Johns-Manville, New York
 Heating system and control panels; steam end valves; connectors and couplers .. Vapor Heating Corp., Chicago
 Air filters Farr Co., Los Angeles, Calif.
 Exhaust fan; fans (steward's room) Westinghouse Electric Corp., Sturtevant Div., Hyde Park, Boston, Mass.
 Air distributors Anemostat Corp. of America, New York
 Budd Company, Philadelphia, Pa.
 Pyle-National Co., Chicago
 Recirculated air grills; door grills Barber-Colman Co., Rockford, Ill.
 Pans (baggage-postal) Safety Car Heating & Lighting Co., New York
 Vestibule enclosures; vestibule curtains Adams & Westlake Co., Elkhart, Ind.
 Outer vestibule diaphragm; vestibule flooring United States Rubber Co., New York



A single color—watermelon red—is combined with bone white and neutral grays in the "French Quarter" lounge

In kitchen and pantry areas the partitions are metal supported on square steel tubing.

The floors in the passenger space are water-resisting plywood. In all chair cars, the dormitory, the coffee-shop-lounge cars, the kitchen passageway and steward's area of the diners, and the lounge car, except the passenger area, the floors are covered with rubber applied over

the plywood. Carpet is laid over rubber padding which is applied on the plywood in the main dining room of the diner, the main passenger area of the lounge car, and in the passageways, bedrooms, and roomettes of the sleeping cars. In the kitchen, pantry and bar areas the floors are stainless steel, with wood racks above. In the baggage and railway post office area, except the fish racks,

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|---|--|--|--|
| Passenger-step mechanism | O. M. Edwards Co., Syracuse, N. Y. | Propane cabinets | Waukesha Motor Co., Waukesha, Wis. |
| Window sash; window-shade mechanism | Adams & Westlake Co., Elkhart, Ind. | Insulation back of range | Johns-Manville, New York |
| Window glass: | | Bars, buffets, refrigerators not in kitchen and pantries | Walrus Manufacturing Co., Decatur, Ill. |
| Inside | Pittsburgh Plate Glass Co., Pittsburgh, Pa. | Refrigerating equipment—kitchen pantries and bars | Carbofrezer Co., San Francisco, Cal. |
| Outside | Libbey-Owens-Ford Glass Co., Toledo, Ohio | Water heater | Vapor Heating Corp., Chicago |
| Kitchens | Mississippi Glass Co., New York | Water heater (kitchen) | Hotstream Heater Co., Cleveland, Ohio |
| Window shades | Collins & Aikman Corp., New York | Water-pipe insulation | Union Asbestos & Rubber Co., Cicero, Ill. |
| Venetian blinds | Pantasote Co., New York | Blind rivets (piping, brackets, etc.) | Clark Equipment Co., Buchanan, Mich. |
| Car-body insulation | Ajax Consolidated Co., Chicago | Water coolers (chair cars) | Westinghouse Electric Corp., Pittsburgh, Pa. |
| | Gustin-Bacon Manufacturing Co., Kansas City, Mo. | Water cooler (R.P.O.) | E. A. Lundy Co., New York |
| Sound deadening in floor, roof, sides and ends | J. W. Mortell Co., Kankakee, Ill. | Water cooler (baggage area) | Henry Giesel Co., Chicago |
| Waterproof adhesive | Acorn Refining Co., Cleveland, Ohio | Cup dispensers | Dixie Cup Co., Easton, Pa. |
| Carpet | Mohawk Carpet Mills, Amsterdam, N. Y. | | United States Envelope Co., Paper Cup Div., Worcester, Mass. |
| Under carpet pad | United States Rubber Co., New York | Lavatories; dental bowls; hoppers, sleepers; shower head and curtain rod | Crane Co., Chicago |
| Rubber flooring | Goodyear Tire & Rubber Co., Akron, Ohio | Shower controls | Kohler Co., Kohler, Wis. |
| Flooring, baggage and postal areas | Worth Lumber Co., Seattle, Wash. | Hoppers | Duner Co., Chicago |
| Foam rubber for seats | Goodyear Tire & Rubber Co., Akron, Ohio | Folding washbasin—crew's and baggage rooms | Adams & Westlake Co., Elkhart, Ind. |
| Coach seats; bulkhead foot rest | Heywood-Wakefield Co., Gardner, Mass. | Paper-towel dispenser | Scott Paper Co., Chester, Pa. |
| Seat coverings: | | Automatic door openers | National Pneumatic Co., Rahway, N. J. |
| Mohair | Collins & Aikman Corp., New York | Locks, cylinder type; interior door closers | Yale & Towne Mfg. Co., Stamford, Conn. |
| Leather | Ashtabula Hide & Leather Co., Ashtabula, Ohio | Door open holder, body end door | Dayton Manufacturing Co., Dayton, Ohio |
| Draperies | Goodall Fabrics, Inc., New York | | H. S. Getty & Co., Philadelphia, Pa. |
| Conductor's revolving seat; vanity stools; dining-room chairs; settee; lounge chair; desk chair | General Fireproofing Co., Youngstown, Ohio | Paint: | |
| Decorative mirrors and etched plate-glass partitions | Cadillac Glass Co., Detroit, Mich. | Exterior | Dolphin Paint & Varnish Co., Toledo, Ohio |
| Murals | Kaufmann & Fabry, Chicago | Interior | Sherwin-Williams Co., Cleveland, Ohio |
| Mattresses | Goodyear Tire & Rubber Co., Akron, Ohio | Aluminum primer | Sherwin-Williams Co., Cleveland, Ohio |
| Kitchen and pantry equipment; steam cooker; Tri-culator; steam table | Angelo Colonna, Philadelphia, Pa. | Fire extinguishers | C-O-Two Fire Equipment Co., Newark, N. J. |
| Range | Stearnes Co., Chicago | | Pyrene Manufacturing Co., Newark, N. J. |
| | | Back-up and emergency light | Mars Signal Light Co., Chicago |



Shelving in the baggage car

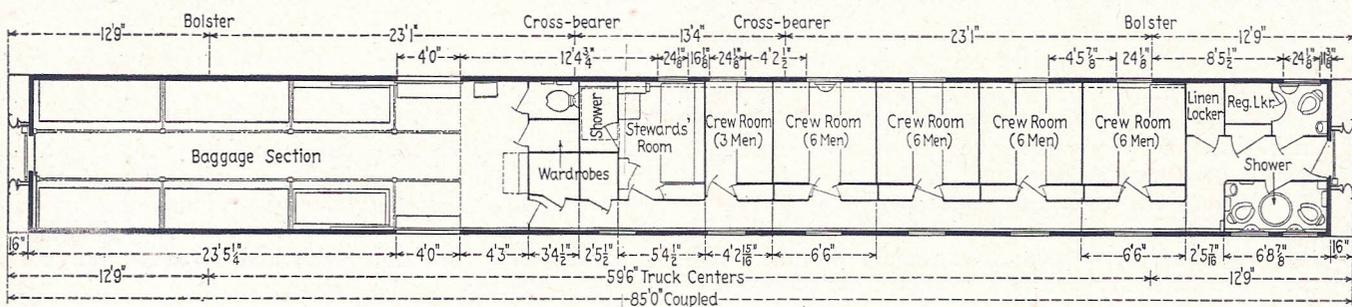
the floor is tongue-and-groove Douglas fir, surfaced with Worthwood end-grain block flooring. The fish-rack area is covered with a water-tight stainless-steel pan in place of the wood-block surface. Removable wood racks are set in the pans.

The car bodies are insulated with Ultralite, 3-in. thick in the roof, sides, ends and floor. A coat of Insulmat is applied to the inside of the floor pans before the insulation is laid. Acobyte Bond sound-deadening material is sprayed on the inside surfaces of the side walls, ends and roofs.

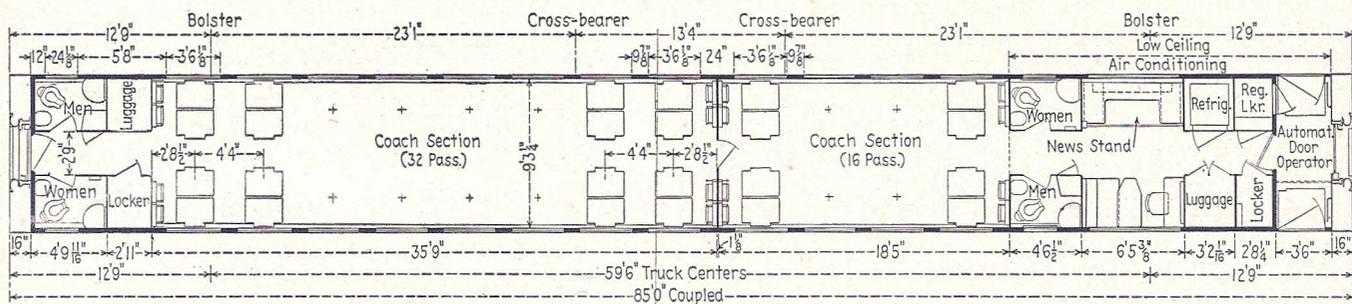
Window sash in the passenger-carrying cars are Adams

& Westlake double-glazed breather type, except in the kitchen and pantry areas and in the baggage-postal car. Body end doors of all passenger-carrying cars are single-section plywood, sheathed on the exterior with stainless steel, and on the interior with Galvannealed steel. All have National Pneumatic automatic door operators, except at the rear of the rear sleeper and in baggage-dormitory and baggage-postal cars.

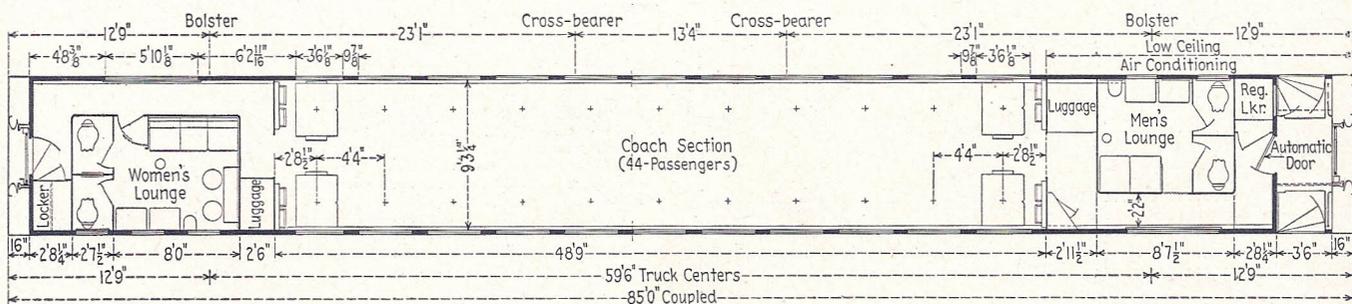
The electrical system on the baggage-postal cars is 32-volt d. c. Power is furnished by a Safety 5-kw. generator with flat-belt drive. On all the other cars power is generated by a General Electric 25-35-kw. axle-driven motor generator. The motor for standby operation is 25-hp., three-phase, 60-cycle, 220-volt, a.c. The drive is the Spicer Model 6-1 with automatic clutch. Power is used at 110 volts d.c. and at 110 and 220 volts a.c. An amplydne booster inverter provides 5 kw. of 60-cycle, three-phase a.c. power at 220 volts for fluorescent lighting and fans. A bank of three 1-k.v.a. transformers convert 220-volt a.c. to 110 volt for lighting and appliances on all cars except the dormitory. Batteries are Edison type A-16-H. All except those for the baggage-postal cars are 90 cells, 115 volts, 600 amp.-hr. at the 5-hr. rate. The baggage-postal car battery comprises 25 cells, 32 volts, with the same ampere-hour capacity. All batteries are mounted in stainless-steel battery boxes with removable roll-out cradles which permit access to the tops of the trays without completely removing the batteries from the car.



Baggage-dormitory car

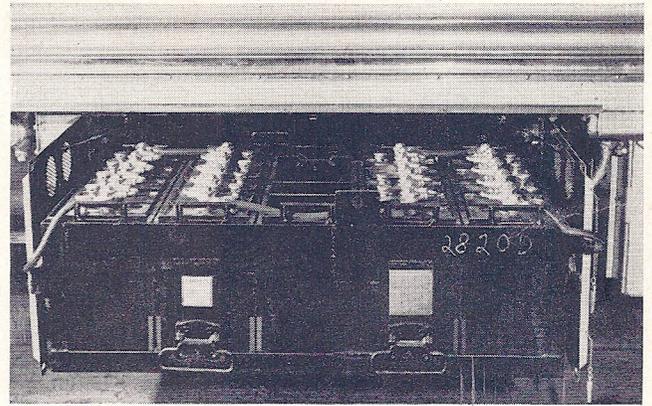


Divided chair car

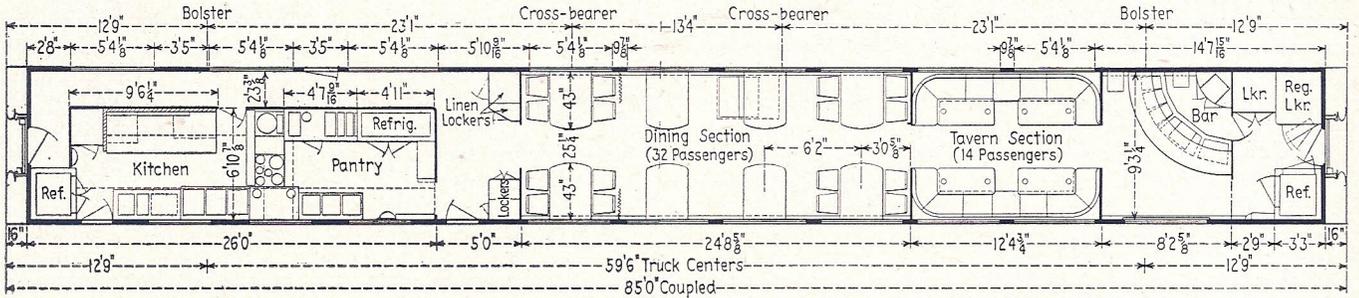


44-passenger chair car

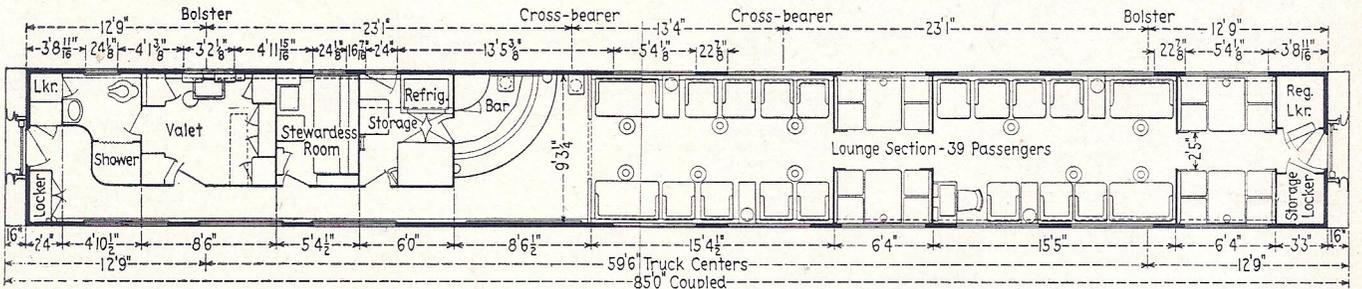
Lighting in the baggage-postal and baggage-dormitory cars is incandescent. In the coaches the center ceiling lights, the lounge ceiling lights, the parcel-rack lights and the passageway ceiling lights are fluorescent. Fluorescent lights are also used in the cove lighting of the dining room, the main lounge of the lounge car, and the tavern and dining cove and the bar cove of the coffee-shop-lounge car. Toilets, lockers, kitchens and night lights are incandescent. In the coaches, bedrooms and roomettes emergency incandescent lamps are installed with the overhead fluorescent lamps. Six-watt blue night lamps are included in the parcel-rack fixtures. All incandescent lamps, except in the baggage-postal car, are on 110-volt d.c. circuits. The instant-start fluorescent lamps in the ceilings



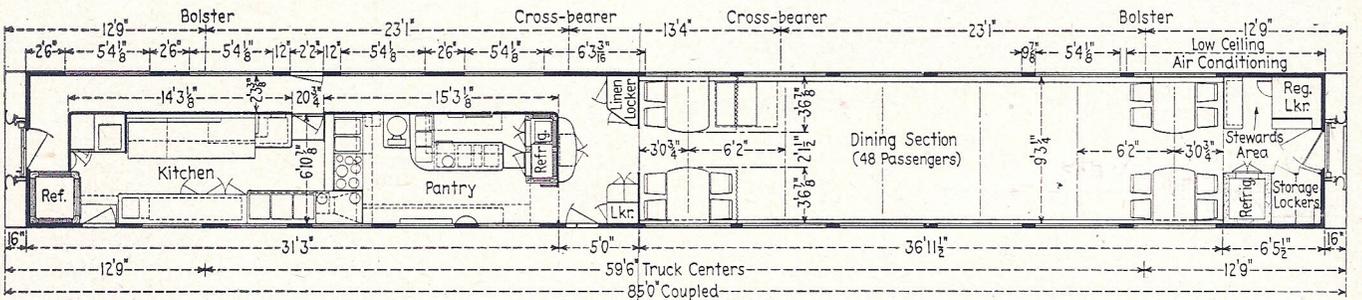
A battery rolled out for inspection



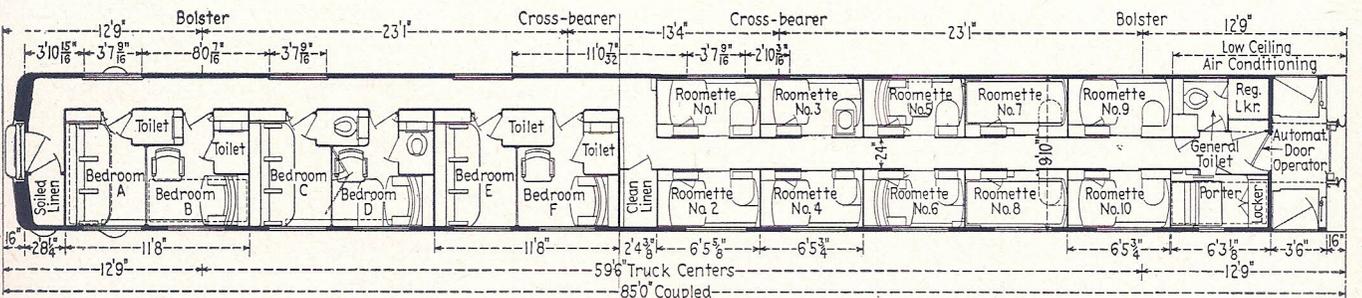
The "Pride of Texas" coffee-shop-lounge



The "French Quarter" lounge



The dining car



Rear sleeping car

of the bedrooms and roomettes of the sleeping cars use 220 volts. Other fluorescent lamps operate on 110-volt a.c. current.

Air-conditioning blower and pump motors are supplied with 220-volt. a.c. current. Room fans and air-conditioning compressor motor operate at 110 volts d.c.

Circuit-breaker protection is provided for power circuits, except for Frigidaire motors which are fused. Solderless terminals are used on all wire and cable. Each car has two-wire battery trainline cable.

All cars except the baggage-postal cars have the Frigidaire electro-mechanical air-conditioning system. The system includes a full flooded condenser with a capacity of 10 tons and an evaporator divided in two equal sections to permit step modulation. The evaporated blower is rated at 2,400 cu. ft. per min.

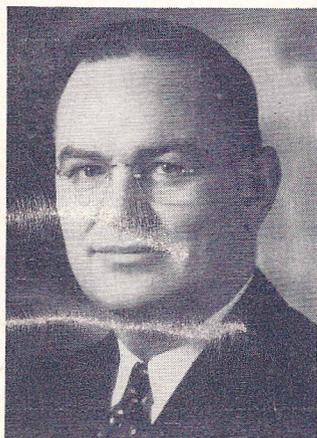
In the coaches air is distributed to the main passenger compartment through a duct over the center of the ceiling, controlled by the railroad's own adjustable-plate distributor. Anemostats are employed in the passageways, rooms of the sleeping cars, and in the small rooms of the lounge car. Multi-Vent air distributors are installed in the dining and lounge areas of the coffee-shop-lounge car, lounge car and the diner. The fresh-air supply amounts to 800 cu. ft. per min. and the recirculated air

to 1,600 cu. ft. per min. Both the fresh and recirculated air passes through two Farr filters before entering the plenum chamber of the blower unit, except on sleeping cars where separate fresh-air and recirculated filters are used. The recirculated filter is the Detroit Dry Throw-Away type.

The cars are heated by the Vapor zone-control system with an overhead heat from coils built into the air-conditioning evaporator. Floor radiators are copper tubes with aluminum fins. Controls in roomettes and bedrooms in the sleeping cars are a selective automatic thermostat which can be set for temperatures between 67 and 80 deg., a separate remote control for a complete shut-off of the floor heat and damper control of the conditioned air delivered to each room. Central control in each car is the Vapor automatic panel both for heat and air conditioning.

All cars except the baggage-postal cars have pressure water systems with two 250-gal. stainless-steel tanks housed under the car and interconnected. In addition, the coffee-shop-lounge car and the diner each has two 75-gal. water tanks over the passageway ceiling piped as a part of the pressure water system. Each sleeping car has a circulating ice-water system.

In the chair and chair-news cars Westinghouse electric



John P. Kiley



Charles H. Buford

At his own request, Charles H. Buford will retire from the presidency of the Chicago, Milwaukee, St. Paul & Pacific on August 31. As reported in *Railway Age* of June 17, page 79, Mr. Buford, who is approaching retirement age, made his request at a meeting of the road's board of directors held in Chicago on June 14. Through its chairman, Leo T. Crowley, the board said that Mr. Buford's request had been granted with reluctance, and with the stipulation that he remain with the railroad in a consulting capacity. John P. Kiley, present vice-president in charge of operations, has since been elected to succeed Mr. Buford. Mr. Crowley said that by remaining available for consultation by the board for a period to be mutually agreed upon, Mr. Buford would be in a position to be of great help to his successor.

Mr. Buford has been associated with the Milwaukee altogether for over 40 years, and has been its president since 1947. Born in Newport, Ark., February 5, 1886, he entered railroad service with the Milwaukee as a civil

Kiley Succeeds

engineer following his graduation in 1907 from the University of Arkansas. He served as engineer of track elevation in Chicago until April, 1917, at which time he was transferred to Sioux City, Iowa, as trainmaster of the Sioux City and Dakota division. In February, 1918, he was transferred in the same capacity to the LaCrosse division with headquarters at Milwaukee, Wis. In July of the same year he was again transferred, this time in the capacity of superintendent of the Wisconsin Valley division at Wausau, but he remained at this point only until November when he was transferred to Green Bay as superintendent of the Superior division. He remained in Green Bay until August, 1919, at which time he was returned to Sioux City as superintendent of the Sioux City and Dakota division.

In November, 1921, Mr. Buford became superintendent of the Milwaukee's Terre Haute division with headquarters at Terre Haute, Ind. He returned to Chicago in October, 1924, to become general superintendent of the Southern district, being promoted thirteen months later to the position of assistant general manager-Lines East, in which capacity his headquarters remained in Chicago. Mr. Buford's next move was to Seattle, Wash., where he served from October, 1927, through September, 1939, as general manager of Lines West.

In October, 1939, Mr. Buford was granted a leave of absence in order that he might serve as vice-president, Operations and Maintenance Department, of the Association of American Railroads at Washington, D. C.

In this capacity, throughout World War II, Mr. Buford was, in effect, "Mister American Railroads" with respect to dealings on operating matters with all government agencies, including the armed forces, the Office of De-

coolers with paper-cup dispensers are installed, one in each chair car and two in each chair-news car. One Giesel ice cooler is placed in each baggage section of the baggage-postal and the baggage-dormitory cars and in the diner and coffee-shop-lounge cars. The postal area has a Lundy combined electromechanical water cooler, food refrigerator and steam cooker unit.

The "French Quarter" Lounge and "Pride of Texas" coffee-shop-lounge cars are each equipped with an R.C.A. radio and public address system, including antenna, radio receiving sets and public-address microphones and amplifiers. The radio receivers are adapted both for AM and FM tuning. There are four speakers in the lounge car and three in the coffee-shop-lounge car. There are five speakers in each chair car and three in each diner. The sleeping cars are not equipped with speakers.

Mechanical Equipment

All cars except the baggage-postal cars have General Steel Castings four-wheel trucks with 8-ft. 6-in. wheel base. Wheels are multiple-wear wrought-steel, 36 in. in diameter. Axles are 6 in. by 11 in. and are fitted with SKF roller bearings and boxes. The springs are helical coil throughout and Houdaille shock absorbers are ap-

plied on the bolster and outboard end transom. Side bearings are the Budd friction type, and Budd disc brakes with Rolokron anti-wheel-slide device are installed throughout. Fabreka sound insulating pads are applied at the bottom of equalizer coil-spring seats and between swing hangers and spring plank. A 1-1/4-in. Thermoid insulating pad is inserted between the body and truck center plates.

The baggage-postal cars have six-wheel trucks with 11-ft. 6-in. wheel base. These differ from the four-wheel trucks in a number of respects. Leaf springs are used under the bolsters, side bearings are Drews Evertite, and the truck brakes are the unit cylinder clasp type with Westinghouse AP decelostat and speed-governor control.

All of the trucks have derailment safety guides fitted in the pedestal openings under all journal boxes. All journal boxes have hot-box odor bombs and thermal elements of the Fenwal hot-box alarm system.

The air brakes are Westinghouse HSC system with electropneumatic straight air control arranged for 100 lb. per sq. in. cylinder pressure. National lever-type hand brakes are placed at each end of each car and arranged to act on all wheels on one side of each truck. Couplers are National Malleable tight lock with uncoupling mechanism operating from one side only. Draft gears are Waughmat WM-6DP.

Buford in "Milwaukee Road" Presidency

fense Transportation and the Interstate Commerce Commission. Mr. Buford took the attitude that, when there wasn't enough transportation to go around, he had to be tough minded. He "appeased" nobody. He insisted that orders for transportation from the armed forces be unified and screened by one unit—the Office of Chief of Transportation of the Army. Despite the natural desire of other offices to contact the carriers direct, Mr. Buford won his point, and the ability of the railroads to carry the load seemingly proved him right.

Mr. Buford's job, of course, posed equally difficult tasks in dealing with the individual railroads. He had no real legal jurisdiction over their affairs. Yet he was responsible for seeing to it that the railroads operated as a unit and that no opportunity be given to the ever-present advocates of government ownership to take over the railroads on the excuse that they could not act in harmony. In many instances, Mr. Buford had to request railroads to undertake difficult and expensive assignments, from which little or no revenue was gained. In many instances it was necessary for small lines to carry dangerous or extra-value war commodities; they ran the risk of claims for damage or injury that would wipe them out. Yet, Mr. Buford has said that no railroad ever refused to carry out a necessary task.

Mr. Buford was appointed federal manager of the nation's railroads when, in 1946, the country faced a nationwide strike of engineers and trainmen, and federal seizure was invoked. Following the end of the two-day work stoppage, and the return of the railroads to their private owners, Mr. Buford came back to the Milwaukee and the post to which he had been elected in March of that year—executive vice-president. In May, 1947, he was

elected to the office of president, succeeding Henry A. Scandrett, who retired at his own request.

A native of Chicago, Mr. Kiley was born on August 13, 1895. He attended Villanova College, Villanova, Pa., and during summer vacations in 1913 and 1914 served as a rodman on track elevation for the Milwaukee. After receiving his degree in civil engineering in 1915, he entered full-time service with the railroad in the valuation department. World War I interrupted his career with the railroad for one year—December, 1917, to December, 1918—during which time he served as a second lieutenant in the Corps of Engineers, U. S. Army.

On his return from military service, Mr. Kiley reentered valuation work in the Milwaukee's financial department where he remained until 1930, rising from instrumentman to assistant valuation engineer. In the latter year he was appointed engineering assistant to the chief financial accounting officer, a position which he held until 1940, when he became special representative of the chief operating officer.

During 1941 and 1942, Mr. Kiley held the position of auditor of investment and joint facility accounts. In November, 1942, he was named assistant to the general manager of Lines East at Chicago, and in June of the following year, he became assistant general manager of the same territory.

In June, 1946, he was appointed assistant to the president, with headquarters in Seattle, a position which he held only until May of 1947 when he was named vice-president at the same point. In June, 1948, Mr. Kiley returned to Chicago to assume the position of vice-president in charge of operations, from which he was advanced to the presidency.